



Descriptive Circular
For 1895.

Crimson Clover,
Cow Peas,
Winter Oats.

Grown and For Sale by

A. N. BROWN,

Wyoming,

Kent County, Delaware.

The Three Greatest Things in Agriculture.

A Few Simple Directions for My Friends to Observe when Ordering Seed.

1. Write your name plainly, giving your town, county and State.
2. Give name of Railroad station or express office to which goods shall be shipped.
3. State by what route shipments shall be made.
4. I am located on the line of P. R. R. and Adams Express Office. If shipment is wanted by other routes I can bill to Wilmington, Del., to be there transferred. But remember this would occasion delay and extra cost.
5. State plainly the number of bushels or pounds of the different kind of seed wanted.
6. When seed is ordered boxed, 15 cents extra will be charged for packages of 1 bushel; for 2 bushel packages, 25 cents extra.
7. Cash must accompany all orders, unless otherwise expressly agreed upon.
8. Remittances can be made by registered letter, P. O. money order, New York draft, by Express, or personal check from responsible parties.
9. Wyoming, Delaware, is a P. O. money order office; has an express office; is 51 miles south of Wilmington, Del., and 78 miles south of Philadelphia, Pa.
10. Shipments for southern points can be made over the N. Y., P. & N. R. R., via. Norfolk, Va., which would be the shortest and cheapest route.
11. As express charges are extremely high, all packages over 30 pounds ought be shipped by freight, therefore to insure the arrival of seed for use when wanted. Orders should be placed early.
12. Prompt attention given to all orders.

Address—

A. N. BROWN,
Wyoming, Kent Co.,
Delaware.

CRIMSON CLOVER, COW PEAS, AND WINTER OATS.

It is the purpose of this circular to give a brief description of the value and use of what I have pleased to designate the three greatest things in agriculture, viz., **Crimson Clover**, **Cow Peas**, and **Winter Oats**.

There never has been a period in the history of American agriculture when farmers, by the force of circumstances beyond their control, were compelled to practice such economical methods of restoring and maintaining the fertility of the soil as the present.

An era of low prices for farm products, unprecedented, in which the high price of commercial manures has been maintained, renders it absolutely impossible for the average farmer to secure the fertility required through the agency of commercial fertilizers. He must, therefore, make use of those methods which for ages have been regarded as most potent, many of which, however, remained to him as a sealed book until in these later years, by the experiences of practical men and the scientific experiments conducted by the various experimental stations of this and other countries, it has been clearly demonstrated that leguminous plants are the cheapest, most rapid, and most permanent soil renovators extant. Nitrogen, the essential agent in plant production, and the most costly, yet which so freely abounds that more than 30,000 tons rest upon every acre, is entrapped and made available for use as plant food through the agency of leguminous plants, for which **Crimson Clover** and **Cow Peas** stand pre-eminent. They therefore lead as active agents in this valuable transforming process, and are regarded as veritable nitrogen traps.

They both make abundant growth of plant and vine, containing a very high percentage of food values, and have extensive root formation, preserving the nitrogen in the soil, as well as gathering large supplies from the air, and owing to their rapid decomposition when used as manurial crops, the nitrogen is speedily liberated, and thus made available for plant food.

Another most valuable feature of these plants is that they have proven their manurial value to be as great when the crop is fed to animals and the manure saved and returned to the soil as when the whole crop is ploughed under as

manure. This, therefore, makes them doubly valuable, for in this way the farmer can supply himself cheaply and abundantly with a most valuable feed without impairing the manurial value of the plant. Another benefit lies in the joint uses of these plants in that **Crimson Clover** is a winter plant, while **Cow Peas** is a summer plant, and two crops can thus be taken from the land each year. Both furnish excellent pasture, are equally good for soiling, ensilage or hay. They are as easily cured for hay as is red clover. The small amount of seed required to seed an acre, and the low price at which good seed is sold, ought to induce farmers to seed these crops every available acre. I believe their intelligent use will go farther towards relieving the present distress among farmers and tend more largely towards solving the great problem of economic production than any other crop or agent.

WINTER OATS

is not a manurial crop, but, sown with Crimson Clover, it is invaluable; first, for protecting the young clover plants from hot or blighting sun; second, forming an excellent mulch for winter; third, for increasing the value of the crop for pasturage, soiling, ensilage or hay. When used for the latter it keeps the clover from lodging, a very important item in so vigorous a plant as Crimson Clover. Winter Oats, of itself, furnishes excellent pasturage, but perhaps its chief value lies in its productiveness as grain, which is more valuable as a food than spring oats. It weighs from 8 to 10 pounds more per measured bushel than spring oats; it furnishes double the quantity of straw; can be sown before or at the time of wheat seeding, and is ready to harvest about the same time. Farmers will at once recognize the advantage of this.

I am now, and always have been, a farmer, and therefore can appreciate the use of *good seed*. This it is my object to furnish; not better than *everybody else*, but as *good as the best*. My seed is all grown from *Pedigree Stock*, harvested with extreme care, so that its vitality is not impaired, and being provided with latest approved machinery, seed is thoroughly recleaned before being sent out. Seed is packed in *new cotton sacks*, and boxed when so ordered. My seed is put entirely upon its merit, having sent seed to every State in the Union, and Canada. The best evidence of the quality lies in the fact of the large increasing trade with my old customers.

CRIMSON CLOVER.

Crimson Clover, or, more commonly called Scarlet, Italian, or German Clover, is an annual of French origin, makes a growth from 20 to 30 inches high, has a bright crimson blossom from $1\frac{1}{2}$ to 3 inches long, and when in full bloom with its luxuriant growth of green foliage and its crimson bloom, is a thing of beauty. It is a winter crop, must be sown in July, August and September of each year from which the spring following can be cut for soiling, by the 20th of April; for ensilage, and hay by 1st to 8th of May, and for seed crop by the 25th of May. It will produce on ordinary soil 12 to 15 tons of green food per acre, $1\frac{1}{2}$ to $2\frac{1}{2}$ tons hay per acre, and 2 to 12 bushels seed per acre. Ploughed under as a manurial crop it is worth as a fertilizer \$30.00 per acre. Experiments at the Delaware Experiment Station have shown that \$1.00 invested in seed per acre added 24 bushels corn. While \$1.00 worth of nitride of soda per acre increased the yield of corn only 6 bushels.

Prof. E. B. Voorhees, Director of the New Jersey Experimental Station, says, on page 21 of Station Bulletin No. 100: "The average of the matured crops on May 24th and 31st contained per acre 200 pounds nitrogen and 6,500 pounds of organic matter, or equivalent to that contained in 20 tons of city manure, which would cost in that form \$30.00."

On page 29 of the same bulletin Professor Voorhees says: "Used as a manure only the average crop per acre is worth \$25.50; when used as a feed the value is increased to \$45.25."

He also shows that Crimson Clover Hay contains 83.6 pounds more digestible matter than Red Clover, and that over 66% of this increase consisted of the most valuable compound, **Protein**. In his summary on page 31 he further says:

"This plant provides a good pasture before other crops are available. An early pasture is not only valuable for food contained in it, but also because it helps to insure proper feeding and to prevent too early use of other and later pasture. It was pastured this year in central New Jersey as early as April the 10th. The crop when 6 inches high contained over 1,300 pounds of digestible food per acre, sufficient to properly nourish 12 cows for one week."

It can be sown in *apple, peach, pear, plum or cherry orchards*, in *corn, tomato, cabbage, beans, peas, watermelon, cantelopes or any cultivated crop*, also with *buckwheat*. Has been sown in *asparagus beds*, in *raspberry and blackberry patches* to keep

down weeds and to be plowed under as manure, with most excellent results. When sown in July and August it furnishes excellent pasture in November and December, can also be pastured some in early spring without injury to either hay or seed crop. Where Red Clover failed to give a good stand or blighted on wheat stubble, the stubble can be harrowed over and **Crimson Clover** sown, which will more than make up the loss of the Red Clover.

Crimson Clover weighs sixty pounds to the bushel. Ten to fifteen pounds are necessary to seed an acre properly, and after sowing the seed it should always be covered by harrowing with a light harrow. There are five types of **Crimson Clover**, one only of which is hardy: In the original seed supply Delaware fortunately secured the hardy type. It has been grown here now for nine years; consequently it is the ninth generation seed, and being of the hardy type and thoroughly acclimated it succeeds in extreme northern latitudes, where it was thought it would not withstand the winter. In the Middle, Atlantic and Southern States it naturally flourishes. Every farmer misses a golden opportunity if he fails to give it a trial on his own grounds.

Professor Voorhees and other experimenters of high authority regard it as hardy as Red Clover. It withstood the winter at the Maine experimental station and attained a growth of 26 inches. Good results have been obtained in northern New York, and I believe that where good *acclimated American grown seed* of the *hardy type* is used it will succeed anywhere that Red Clover will. I believe also that the chief cause of failure has been invariably in the use of seed that was not of the hardy type, or was imported and not acclimated or from partially germinated seed by which it was rendered unfertile.

Crimson Clover will grow on poor light soils when other grasses fail. It does not interfere with, but is an addition to other farm crops, as with it a crop of hay can be removed from the land and a crop of corn, tomatoes, peas, beans, potatoes or any other cultivated crop grown each year. In this respect it is decidedly the peer of all other clovers or leguminous plants, and justly entitled to be called *The Wonderful Forage Plant, The Great Nitrogen Gatherer, The Mortgage Lifter, The Great Soil Renovator*, etc. By its use poor soils can be improved more rapidly than by any other method. Therefore, it is the cheapest and best fertilizer. It makes an abundant food of highest quality. As pasture, stock prefer it to other grass. As a soiling crop or for ensilage it cannot be excelled, and for hay stock not only have a decided preference for it, but they thrive remarkably upon it.

The Delaware Experimental Station sums up its uses as follows:

1. *To plow down for green manure.*
2. *For Silage.*
3. *For Soiling.*
4. *For Haymaking.*
5. *For Seed production.*
6. *For eradication of weeds.*
7. *For reduction of expenses in cultivating orchards.*
8. *For winter and spring pasture.*
9. *As a protection for falling fruit in orchards.*
10. *For binding drift soils and for preventing washing on hill sides.*
11. *As Bee Food.*

I make a specialty of growing seed, and have large quantities grown for my trade by many of the best growers in Delaware and Maryland. My aim is to furnish nothing but **pure, high grade, thoroughly re-cleaned seed.** The hardiness of the seed I offer has been demonstrated by trial throughout the United States. Beware of old and imported seed. Samples on application.

Prices per pound, Postpaid, 25 cents. Peck, \$1.50. Half Bushel, \$2.25. Bushel, \$4.00.

(Above prices subject to market changes.)

NOTE.—Recent reports from Connecticut and New York show that **Crimson Clover** succeeds as well when sown in the Spring as if sown in the Fall in those States. This would make it doubly valuable in latitudes north of New York City, and farmers in those sections are not alive to their interests if they do not give it a thorough trial in this respect.

COW PEAS.

The **Cow Pea**, grown extensively throughout the Southern States for many years, and there called the "King of Land Renovators," is too well known to require an extended description; but some facts regarding **Cow Peas** have been demonstrated by means of recent experiments, by which its value has been enhanced, and which makes the selection of varieties of such importance that particular attention should be directed to it.

Cow Peas have been chiefly grown in the South to reclaim or renovate soils too poor to grow clover and for seed production. Scientific experiments and practical tests have, however, demonstrated that the food value of the **Cow Pea**, either for ensilage or hay, is equal to, if not exceeds, clover, and by putting it to this use its manurial value is not impaired when fed to stock and the manure returned to the soil. This being the case, only the erect-growing varieties should be sown, as it is almost impossible to harvest the recumbent varieties without great loss of vine, that is valuable for food. Of the more than forty varieties now grown, those herewith described have proven to be the most valuable and the best for all purposes.

Cow Peas are a summer crop. Should be sown from 1st to 12th of June. When sown in drills 3 feet apart, 1 bushel will seed 2 acres. Sown broadcast (which will be found the best way to sow them), from 1 to $1\frac{1}{4}$ bushels is required to seed an acre properly. The best way to sow them is to use an ordinary wheat drill, closing every other gain. The crop is improved by the addition of acidulated rock, 300 pounds per acre—no potash. They should be harvested when the pods begin to turn light if used for hay. **Cow Peas** will yield from 8 to 12 tons of vines per acre, which is equivalent to from 1 to $2\frac{1}{2}$ tons cured hay per acre. All varieties, except the *black*, must not be sown before the ground becomes warm, or else the cold soil will cause them to decay. They can be sown after a crop of **Crimson Clover** has been harvested, and will mature their crop in time to again seed the land to **Crimson Clover** the same season. In the South and Middle Belt States they can be used for both vine and seed production; in the North for only vine production.

The Georgia experimental station gives the following summary of results with their experiments:

1. The best disposition of a crop of **Cow Peas** is to convert the vines into hay (or ensilage).

2. The next best is to permit the peas to ripen and gather (or pasture them).

3. Mowing the vines and permitting them to lie on the surface and plowing under in November was decidedly better than turning the vines under in August.

4. Turning the vines under green gave the poorest economic results.

VARIETIES.

New Era. Recumbent. Vine and leaf light. Kidney. Very early, makes two crops a year. Pod, medium, yellow. Pea, small to medium, brown, speckled on grayish blue ground. Moderate yielder. *\$ 5.00 per bus.*

Clay. Tall, erect grower; large, heavy leaf and stalk, dark green and vigorous. Light purple blossom. Form, kidney. Pod, large, yellow. Pea, medium, cream colored. Very late. Very heavy yielder of both vines and peas. A standard variety and one of the best, if not the very best. *\$ 3.00 per bus.*

Unknown. Synonyms: *Wonderful; Quadroon.* The name is now a paradox, as it is one of the best known varieties, and widely and justly celebrated. Growth erect—in course of time trailing at ends on rich soil. Stalk and leaf vigorous, dark green. Blossom, purple. Form, kidney. Pod, large, yellow. Pea, medium, pale buff, with greenish tint. Very late. Very heavy producer of vines and heavy yielder of peas. Perhaps the best “all round” pea. *\$ 3.00 per bus.*

Black. Semi-recumbent; trails at end of vines; leaf and stalk moderately large; vigorous. Blossom, purple. Form, kidney. Pod, medium, yellow. Pea, medium, jet black. Heavy producer of both vines and peas. Very late. Hardy; pea will sprout after lying in ground all winter. *\$ 1.50 per bus.*

The **New Era** is the earliest Cow Pea, maturing its crop in 60 days, thereupon best adapted for the north. **Unknown** and **Black** are the heaviest yielders of vine. The best of the erect varieties are the **Unknown** and **Clay**.

The best stock Pea for field grazing is the **Black**. It will remain in the ground all winter without injury.

The **Unknown** is the best all-purpose Pea, with **Clay** second.

Prices on application.

WINTER OATS.

More profitable than Spring Oats. Nothing new, having been thoroughly tried and succeeded well throughout the United States. They are sown in the fall when wheat is seeded, or earlier if desired. They will mature their crop usually a few days later than wheat; a vigorous grower; average height when ripe to cut, four feet; stool wonderfully; single grains throw up from ten to twenty stalks, which bear large, well filled heads. They have a stiff straw, stand up well, and yield from thirty to sixty bushels of oats to an acre. Will produce a crop on moderately poor land, where Spring Oats would fail. They weigh from forty to forty-five pounds to the bushel; this alone should be sufficient to induce farmers to grow them. They are perfectly hardy, having withstood a temperature of 40° below zero. If sown early in September, they furnish excellent pasture in the fall, which is a benefit instead of a detriment.

These oats have been grown here for the past eight years, and are doing as well to-day as when first sown. The seed I offer is pedigree stock—thoroughly reliable. They ought to be grown more extensively throughout the country. One bushel will seed an acre. Price \$1.00 per bushel, in sacks, F. O. B.

The prices quoted on all seeds includes the cost of sacks—i. e., no charge made for sacks.

Other grass seeds furnished when desired. Prices given upon application.

Place your order now.

EXTRACTS FROM FARMERS' BULLETIN, NO. 16,

BY

E. W. ALLEN, Ph. D.,

ASSISTANT DIRECTOR OF THE OFFICE OF EXPERIMENT STATION,
AGRICULTURAL DEPARTMENT, WASHINGTON, D. C.

Green manuring improves the physical properties of the soil by making the soil more porous and adding to its supply of humus. It brings up the dormant plant-food from deep down in the soil and deposits it near the surface, where it can be used by plants feeding near the surface.

Green manuring with buckwheat, Hungarian grass, and other non-leguminous plants adds practically nothing to the soil which was not there before, except a mass of vegetable matter which decays and goes to form humus.

But animals, as well as plants, require nitrogen for food. By feeding the crops of clover, cow pea, etc., only about one-fourth of the fertilizing materials of the crop is lost if the manure is properly cared for. As the nitrogen of the air is the cheapest source of nitrogen for plants, so it is the cheapest source of protein (nitrogen) for animals. The leguminous crop is the best utilized when it is fed out on the farm and the manure saved and applied to the soil. The greatest profit is thus secured and nearly the same fertility is maintained as in green manuring.

The system of soiling, or feeding green crops in the barn in place of pasturage, enables a larger number of animals to be kept on a given area of land, and the manure to be more completely saved. For this purpose leguminous crops are extremely valuable.

Trials at the station in Wisconsin showed that "by soiling in summer a certain area of land will yield double the amount of milk and butter that it will when pastured."

COW PEA FOR FEEDING.

A prominent agriculturist in the South says of the cow pea: "For the production of a nitrogenous food in the shape of a forage crop the cow pea vines are almost without a rival. * * * On an acre of ordinary land this crop will probably produce more digestible food than either oats or corn. The manure resulting from feeding this crop is of the highest value, and should be carefully preserved and returned to the land."

At the Rhode Island experiment station a crop of $17\frac{1}{2}$ tons of green cow-pea forage was harvested. This contained $157\frac{1}{2}$ pounds of nitrogen, which, at 15 cents per pound, would make the crop worth \$23.63 per acre for green manuring. At \$3 per ton the $17\frac{1}{2}$ tons would be worth \$52.50 for feeding, and there would be less than one-third of the fertilizing ingredients lost in feeding the crop.

Grow more leguminous crops. They furnish the cheapest food for stock and the cheapest manure for the soil. They do this because they obtain from the air a substance necessary for plants and animals alike, which costs in the form of fertilizers and feeding stuffs from 15 to 25 cents a pound.

